

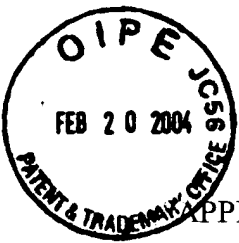


0001/PTO Rev. 10/95		U.S. Department of Commerce Patent and Trademark Office	
TRANSMITTAL FORM (to be used for all correspondence during pendency of filed application)		Application Number	10/733,153
		Filing Date	December 10, 2003
		First Named Inventor	Donald Steiss
		Group Art Unit Number	Not Yet Known
		Examiner Name	Not Yet Known
Total Number of Pages in This Submission	7*	Attorney Docket Number	22347-08260 (Seq. No. 8116)

ENCLOSURES (check all that apply)	
<input type="checkbox"/> Fee Transmittal Form (in duplicate) <input type="checkbox"/> Check Enclosed	<input type="checkbox"/> Issue Fee Transmittal
<input checked="" type="checkbox"/> Return Receipt Postcard	<input type="checkbox"/> Letter to Chief Draftsperson
<input type="checkbox"/> Response to Notice to File Missing Parts	<input type="checkbox"/> Formal Drawing(s): [] Sheet(s) of Figure(s) []
<input type="checkbox"/> Assignment & Recordation Cover Sheet	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Declaration	<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> Power of Attorney	<input type="checkbox"/> Certified Copy of Priority Document(s)
<input type="checkbox"/> Application Data Sheet	<input type="checkbox"/> After Allowance Communication to Group
<input checked="" type="checkbox"/> Information Disclosure Statement & PTO/SB/08A <input checked="" type="checkbox"/> Copies of IDS Non-patent Cited References	<input type="checkbox"/> _____
<input type="checkbox"/> Request for Corrected Filing Receipt	<input type="checkbox"/> _____
<input type="checkbox"/> Request for Correction of Recorded Assignment	<input type="checkbox"/> _____
<input type="checkbox"/> Amendment/Response: [] Page(s) <input type="checkbox"/> After Final	<input type="checkbox"/> _____
<input type="checkbox"/> Status Request	<input type="checkbox"/> _____
<input type="checkbox"/> Revocation and Substitute Power of Attorney	<input type="checkbox"/> _____
REMARKS: * No. of pages does not include pages of cited references	

SIGNATURE OF ATTORNEY OR AGENT			
Signature:			
Attorney/Reg. No.:	Dorian Cartwright/Reg. No. 53,853	Dated:	2/18/04

CERTIFICATE OF MAILING			
I hereby certify that this correspondence, including the enclosures identified above, is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below. If the Express Mail Mailing Number is filled in below, then this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service pursuant to 37 CFR 1.10.			
Signature:			
Typed or Printed Name:	Dorian Cartwright	Dated:	2/18/04
Express Mail Mailing Number (optional):			



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Donald Steiss et al.
APPLICATION NO.: 10/733,153
FILING DATE: December 10, 2003
TITLE: Thread Interleaving In A Multithreaded Embedded Processor
EXAMINER: Not Yet Known
GROUP ART UNIT: Not Yet Known
ATTY. DKT. NO.: 22347-08260

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below:

Dated: _____

2/18/04

By: _____

Dorian Cartwright

Dorian Cartwright, Reg. No.: 53,853

COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Under 37 CFR §§ 1.56 and 1.97-98

SIR:

Pursuant to the provisions of 37 CFR §§ 1.56 and 1.97-98, enclosed herewith is modified form PTO/SB/08A listing references for consideration by the Examiner. Enclosed is a copy of each listed non-patent reference that may be material to the examination of this application, and for which there may be a duty to disclose.

The filing of this Information Disclosure Statement shall not be construed as a representation regarding the completeness of the list of references, or that inclusion of a reference in this list is an admission that it is prior art or is pertinent to this application, or that a search has been made, or as an admission that the information listed is, or may be considered to be, material to patentability, or that no other material information exists, and shall not be construed as an admission against interest in any manner.

This Information Disclosure Statement is being filed:

- ☒ within three months of the filing date of the application, or date of entry into the national stage of an international application, or before the mailing date of a first office action on the merits, whichever event last occurred;
- ☐ before the mailing of a first official action after the filing of a request for continued examination (RCE) under 37 CFR § 1.114;

- ☐ after three months of the filing date of this national application or the date of entry of the national stage in an international application, or after the mailing date of the first official action on the merits, whichever event last occurred, but before the mailing date of the first to occur of either: (1) a final action under 37 CFR §1.113; or (2) an action that otherwise closes prosecution in the application, and:
 - ☐ attached hereto is the fee set forth under 37 CFR §1.17(p) for submission of this Information Disclosure Statement under 37 CFR. § 1.97(c); OR
 - ☐ Applicant certifies pursuant to 37 CFR § 1.97(e) that:
 - ☐ each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement; OR
 - ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing this certification after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated under 37 CFR § 1.56(c) more than three months prior to the filing of this Statement;
- ☐ on or before the payment of the issue fee but after the mailing date of the first to occur of either: (1) a final action under 37 CFR § 1.113; (2) a notice of allowance under 37 CFR § 1.311; or (3) an action that otherwise closes prosecution in the application, and:
 - ☐ Applicant certifies pursuant to 37 CFR. § 1.97(e) that:
 - ☐ each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement; or
 - ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing this


certification after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated under 37 CFR § 1.56(c) more than three months prior to the filing of this Statement; AND

- ☐ attached hereto is the fee set forth under 37 CFR §1.17(p) for submission of this Information Disclosure Statement under 37 CFR. § 1.97(c); OR
- ☐ after the payment of the issue fee. Applicant requests that the information contained in this Information Disclosure Statement be placed in the file according to 37 CFR § 1.97(i), although the information may not be considered by the USPTO.
- ☐ This application relies, under 35 U.S.C. § 120, on the earlier filing date of prior application No. APPLICATION NO., filed on DATE FILED, and the references cited therein are hereby referenced, but are not required to be provided in this application under 37 CFR § 1.98(d).
- ☐ Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not received by any individual designated in 37 CFR § 1.56(c) more than thirty days prior to the filing of this Information Disclosure Statement. 37 CFR § 1.704(d).
- ☒ Applicant submits that no fee is required for the consideration of this Information Disclosure Statement.

Consideration of the listed references and favorable action are solicited.

Respectfully submitted,
DONALD STEISS ET AL.

Dated: 2/18/04

By: 
Dorian Cartwright, Reg. No.: 53,853
Fenwick & West LLP
Silicon Valley Center
801 California Street
Mountain View, CA 94041
Tel.: (650) 335-7247
Fax.: (650) 938-5200



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT****Complete if Known**

Application No.	10/733,153
Filing Date	December 10, 2003
First Named Inventor	Donald Steiss
Art Unit	Not Yet Known
Examiner Name	Not Yet Known
Attorney Docket Number	22347-08260 (Seq. No. 8116)

Sheet

1

of

3

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document No. Number – Kind Code ² (if known)	Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		US-5,613,114	03-18-1997	Anderson et al.
		US-5,724,586	03-03-1998	Edler et al.
		US-5,742,822	04-21-1998	Motomura
		US-5,771,382	06-23-1998	Wang et al.
		US-5,799,188	08-25-1998	Manikundalam et al.
		US-5,907,702	05-25-1999	Flynn et al.
		US-5,913,049	06-15-1999	Schiell et al.
		US-6,016,542	01-18-2000	Gottlieb et al.
		US-6,073,159	06-06-2000	Emer et al.
		US-6,076,157	06-13-2000	Borkenhagen et al.
		US-6,105,051	08-15-2000	Borkenhagen et al.
		US-6,212,544	04-03-2001	Borkenhagen et al.
		US-6,216,220	04-10-2001	Hwang
		US-6,223,208	04-24-2001	Kiefer et al.
		US-6,256,775	07-03-2001	Flynn
		US-6,272,520	08-07-2001	Sharangpani et al.
		US-6,292,888	09-18-2001	Nemirovsky et al.
		US-6,308,261	10-23-2001	Morris et al.
		US-6,341,347	01-22-2002	Joy et al.
		US-6,353,881	05-05-2002	Chaudhry et al.
		US-6,385,715	05-07-2002	Merchant et al.
		US-6,411,982	06-25-2002	Williams
		US-6,418,458	07-09-2002	Maresco
		US-6,477,562	11-05-2002	Nemirovsky et al.
		US-6,490,612	12-03-2002	Jones et al.

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.

Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application No.	10/733,153
				Filing Date	December 10, 2003
				First Named Inventor	Donald Steiss
				Art Unit	Not Yet Known
Examiner Name	Not Yet Known				
Sheet	1	of	3	Attorney Docket Number	22347-08260 (Seq. No. 8116)

U.S. PATENT DOCUMENTS				
Examiner Initials*	Cite No. ¹	Document No.		Name of Patentee or Applicant of Cited Document
		Number – Kind Code ² (if known)	Date MM-DD-YYYY	
		US-5,613,114	03-18-1997	Anderson et al.
		US-5,724,586	03-03-1998	Edler et al.
		US-5,742,822	04-21-1998	Motomura
		US-5,771,382	06-23-1998	Wang et al.
		US-5,799,188	08-25-1998	Manikundalam et al.
		US-5,907,702	05-25-1999	Flynn et al.
		US-5,913,049	06-15-1999	Schiell et al.
		US-6,016,542	01-18-2000	Gottlieb et al.
		US-6,073,159	06-06-2000	Emer et al.
		US-6,076,157	06-13-2000	Borkenhagen et al.
		US-6,105,051	08-15-2000	Borkenhagen et al.
		US-6,212,544	04-03-2001	Borkenhagen et al.
		US-6,216,220	04-10-2001	Hwang
		US-6,223,208	04-24-2001	Kiefer et al.
		US-6,256,775	07-03-2001	Flynn
		US-6,272,520	08-07-2001	Sharangpani et al.
		US-6,292,888	09-18-2001	Nemirovsky et al.
		US-6,308,261	10-23-2001	Morris et al.
		US-6,341,347	01-22-2002	Joy et al.
		US-6,353,881	05-05-2002	Chaudhry et al.
		US-6,385,715	05-07-2002	Merchant et al.
		US-6,411,982	06-25-2002	Williams
		US-6,418,458	07-09-2002	Maresco
		US-6,477,562	11-05-2002	Nemirovsky et al.
		US-6,490,612	12-03-2002	Jones et al.

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.

Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

22347/08260/DOCS/1412274.1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application No.	10/733,153
				Filing Date	December 10, 2003
				First Named Inventor	Donald Steiss
				Art Unit	Not Yet Known
				Examiner Name	Not Yet Known
Sheet	2	of	3	Attorney Docket Number	22347-08260 (Seq. No. 8116)

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document No. Number – Kind Code ² (if known)	Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		US-6,507,862	01-14-2003	Joy et al.
		US-6,535,905	03-18-2003	Kalafatis et al.
		US-6,542,920	04-01-2003	Belkin et al.
		US-6,542,921	04-01-2003	Sager
		US-6,542,987	04-01-2003	Fischer et al.
		US-6,556,045	04-29-2003	Cohen
		US-6,567,839	05-20-2003	Borkenhagen et al.
		US-6,584,488	06-24-2003	Brenner et al.
		US-6,594,755	07-15-2003	Nuechterlein et al.
		20010056456	12-27-2001	Cota-Robles
		20020010733	01-24-2002	Baba et al.
		20030154235	08-14-2003	Sager
		20030158885	08-21-2003	Sager

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ – Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T ⁶

OTHER REFERENCES – NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ⁶
	C2	Boothe, B. and Ranade, A. G., "Improved Multithreading Techniques for Hiding Communication Latency in Multiprocessors," ACM 1992, pp. 214-223.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.

Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application No.	10/733,153
				Filing Date	December 10, 2003
				First Named Inventor	Donald Steiss
				Art Unit	Not Yet Known
				Examiner Name	Not Yet Known
Sheet	3	of	3	Attorney Docket Number	22347-08260 (Seq. No. 8116)

OTHER REFERENCES – NON-PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ⁶	
	C2	Gulati, M. and Bagherzadeh, N., "Performance Study of a Multithreaded Superscalar Microprocessor," 2 nd International Symposium on High-Performance Computer Architecture, February 1996, 11 pages.		
	C3	Loikkanen, M. and Bagherzadeh, N., "A Fine-Grain Multithreading Superscalar Architecture," Proc. 1996 Confer. Parallel Architectures and Compilation Techniques, October 1996, 6 pages.		
	C4	Tullsen, D. M. et al., "Exploiting Choice: Instruction Fetch and Issue on an Implementable Simultaneous Multithreading Processor," Proc. Of the 23 rd ISCA, May 1996, 12 pages.		
	C5	Tullsen, D. M. et al., "Simultaneous Multithreading: Maximizing On-Chip Parallelism," Proc. Of the 22 nd ISCA, June 1995, 12 pages.		
	C6	Yamamoto, W., "An Analysis of Multistreamed, Superscalar Processor Architectures." Ph.D. Thesis, U.C. Santa Barbara, Dec. 1995, pp. 1-155.		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.

Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

22347/08260/DOCS/1412274.1